This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A plate ~~Plate~~ heat exchanger comprising: ~~with~~

a heat exchanger block having ~~which has~~ a multiplicity of heat exchange passages having inlet and outlet orifices, said ~~the~~ heat exchanger block having mounted upon it a header which extends over at least part of one side of the heat exchanger block, said header having ~~and makes~~ a fluid ~~flow~~ connection for supplying or removing fluid from ~~between~~ part of said ~~the~~ heat exchange passages ~~and which is provided with a fluid connection~~, said ~~the~~ fluid connection being arranged in a plane which lies essentially perpendicularly to the plane in which corresponding inlet or outlet orifices of said heat exchange passages are located ~~to that side of the heat exchanger block over which the header extends~~, and ~~characterized in that~~ means (23, 24), within said header (6, 7), for routing the flow of ~~the~~ fluid supplied or discharged via said ~~the~~ fluid connection (12, 13) ~~are provided within the header (6, 7)~~.

2. (Currently Amended): A plate ~~Plate~~ heat exchanger according to Claim 1, wherein said ~~characterized in that the~~ header (6, 7) possesses a semicircular cross section.

3. (Currently Amended): A plate ~~Plate~~ heat exchanger according to Claim 1, wherein said ~~characterized in that the~~ plate heat exchanger has a plurality of heat exchanger blocks (1a, 1b), and a header (6a, 6b; 7a, 7b) in which ~~the~~ flow connection between heat exchange passages of various heat exchanger blocks (1a, 1b) is made.

4. (Currently Amended): A plate ~~Plate~~ heat exchanger according to Claim 3, wherein said ~~characterized in that the~~ heat exchanger blocks (1a, 1b) are arranged, spaced apart, next to one another, and the gap between the heat exchanger blocks (1a, 1b) is closed by means of a sheet (16, 27) or a strip in such a way that that side of the header (6a, 6b; 7a, 7b) which faces the heat exchanger blocks (1a, 1b) is completely covered by

the side faces (5a, 5b; 6a, 6b) of the heat exchanger block (1a, 1b) and/or the sheet or strip (16, 27).

5. (Currently Amended): A plate ~~Plate~~ heat exchanger according to Claim 2, wherein said ~~characterized in that the~~ plate heat exchanger has a plurality of heat exchanger blocks (1a, 1b), and a header (6a, 6b; 7a, 7b) in which ~~the~~ flow connection between heat exchange passages of various heat exchanger blocks (1a, 1b) is made.

6. (Currently Amended): A plate ~~Plate~~ heat exchanger according to Claim 5, wherein said ~~characterized in that the~~ heat exchanger blocks (1a, 1b) are arranged, spaced apart, next to one another, and the gap between the heat exchanger blocks (1a, 1b) is closed by means of a sheet (16, 27) or a strip in such a way that that side of the header (6a, 6b; 7a, 7b) which faces the heat exchanger blocks (1a, 1b) is completely covered by the side faces (5a, 5b; 6a, 6b) of the heat exchanger block (1a, 1b) and/or the sheet or strip (16, 27).

7. (New): A plate heat exchanger according to Claim 1, wherein said means for routing the flow of fluid supplied or discharged are guide sheets (23, 24) which subdivide the space within said header into a flow region (25) and a distribution region (26), and said guide sheets are provided with a multiplicity of orifices to permit gas and liquid exchange between said flow region (25) and said distribution region (26).

8. (New): A plate heat exchanger according to Claim 1, wherein said header has a semicircular cross section and is in the shape of a semi-cylindrical shell, and said fluid connection is located in one of two semicircular base surfaces of said header.

9. (New): A plate heat exchanger according to Claim 8, wherein the other of said two semicircular base surfaces of said header is oriented obliquely to the semi-cylindrical shell.

10. (New): A plate heat exchanger according to Claim 1, wherein said plate heat exchanger has a plurality of heat exchanger blocks (1a, 1b) wherein each of said heat exchanger blocks has a multiplicity of heat exchange passages having inlet and outlet orifices, and said header (6a, 6b; 7a, 7b) provides fluid communication between said flow connection and said multiplicity of heat exchange passages in each of said plurality of heat exchanger blocks (1a, 1b).

11. (New): A plate heat exchanger according to Claim 1, wherein said plate heat exchanger has a plurality of heat exchanger blocks (1a, 1b) wherein each of said heat exchanger blocks has a multiplicity of heat exchange passages having inlet and outlet orifices, and a header, wherein the header of one heat exchanger block is connected directly to said fluid connection of the header of an adjacent heat exchanger block resulting in a continuous header which extends over all the heat exchanger blocks.

12. (New): A plate heat exchanger according to Claim 1, wherein said plate heat exchanger has at least two headers, a first header which extends over one side of the heat exchanger block, and a second header which extends over another side of the heat exchanger block, said first header having a first fluid connection for supplying fluid to part of said heat exchange passages and said second header having a second fluid connection for removing fluid from part of said heat exchange passages, each of said fluid connections being arranged in a plane which lies essentially perpendicularly to the plane in which corresponding inlet or outlet orifices of said heat exchange passages are located.

13. (New): A plate heat exchanger according to Claim 12, wherein

each of said first and second headers has a semicircular cross section and is in the shape of a semi-cylindrical shell,

said first fluid connection is located in one of two semicircular base surfaces of said first header, and

said second fluid connection is located in one of two semicircular base surfaces of

said second header.

14. (New): A plate heat exchanger according to Claim 12, wherein said first fluid connection and said second fluid connection are both being located on the same side of said heat exchanger block.

15. (New): A plate heat exchanger according to Claim 1, wherein

said plate heat exchanger has a plurality of heat exchanger blocks (1a, 1b), each of said heat exchanger blocks having a multiplicity of heat exchange passages having inlet and outlet orifices, each of said heat exchange blocks having a supply header which is in fluid communication with inlet orifices of part of said heat exchange passages, each of said heat exchange blocks having a discharge header which is in fluid communication with outlet orifices of part of said heat exchange passages,

each of said supply header having a first fluid connection which is arranged in a plane which lies essentially perpendicularly to the plane in which corresponding inlet orifices of said heat exchange passages are located,

each of said discharge header having a second fluid connection which is arranged in a plane which lies essentially perpendicularly to the plane in which corresponding outlet orifices of said heat exchange passages are located,

wherein the supply header of one heat exchanger block is connected directly to the fluid connection of the supply header of an adjacent heat exchanger block resulting in a continuous supply header extending over all the heat exchanger blocks, and

wherein the discharge header of one heat exchanger block is connected directly to the fluid connection of the discharge header of an adjacent heat exchanger block resulting in a continuous discharge header extending over all the heat exchanger blocks.

16. (New): A plate heat exchanger according to Claim 15, wherein

said continuous supply header has a semicircular cross section and is in the shape of a semi-cylindrical shell,

said continuous discharge header has a semicircular cross section and is in the shape of a semi-cylindrical shell,

a fluid connection of said continuous supply header is located in one of two semicircular base surfaces of said continuous supply header, and

a fluid connection of said continuous discharge header is located in one of two semicircular base surfaces of said continuous discharge header.

17. (New): A plate heat exchanger according to Claim 16, wherein the fluid connections of said continuous supply header and said continuous discharge header that are located in the semicircular base surfaces are both being located on the same side of said heat exchanger block.

18. (New): A plate heat exchanger according to Claim 3, wherein said heat exchanger blocks (1a, 1b) are arranged, spaced apart, next to one another, and are welded together by means of a U-shaped sheet (16) whereby the U-shaped sheet (16) connects the undersides (5a, 5b) of said heat exchanger blocks (1a, 1b) in such a way that a continuous plane is obtained.

19. (New): A plate heat exchanger according to Claim 5, wherein said heat exchanger blocks (1a, 1b) are arranged, spaced apart, next to one another, and are welded together by means of a U-shaped sheet (16) whereby the U-shaped sheet (16) connects the undersides (5a, 5b) of said heat exchanger blocks (1a, 1b) in such a way that a continuous plane is obtained.

20. (New): A plate heat exchanger comprising:

a heat exchanger block having a multiplicity of heat exchange passages having inlet and outlet orifices, a supply header mounted on said heat exchange block which extends over at least part of one side of the heat exchanger block and which is in fluid communication with inlet orifices of part of said heat exchange passages, and a discharge

header mounted on said heat exchange block and which is in fluid communication with outlet orifices of part of said heat exchange passages,

said supply header having a first fluid connection which is arranged in a plane which lies essentially perpendicularly to the plane in which corresponding inlet orifices of said heat exchange passages are located,

said discharge header having a second fluid connection which is arranged in a plane which lies essentially perpendicularly to the plane in which corresponding outlet orifices of said heat exchange passages are located,

a first routing means, within said supply header, for routing the flow of fluid supplied via said first fluid connection,

a second routing means, within said discharge header, for routing the flow of fluid to be discharged via said second fluid connection (12, 13).

21. (New): A plate heat exchanger comprising:

a heat exchanger block having a multiplicity of heat exchange passages having inlet and outlet orifices, said heat exchanger block having mounted upon it a header which extends over at least part of one side of the heat exchanger block, said header having a fluid connection for supplying or removing fluid from part of said heat exchange passages, said fluid connection being arranged being arranged so as to not be located directly opposite inlet or outlet orifices of said heat exchange passages, and means (23, 24), within said header (6, 7), for routing the flow of fluid supplied or discharged via said fluid connection (12, 13).